

## I CLAIM

1. An improvement to any monohull sailboat consisting of wings mounted one on each side of the hull between the aft rail and the chine
2. said wings are tilted upward in roll at a fixed dihedral angle
3. said wings each have an individual span that may be straight, V-shaped, curved or with a combination thereof
4. said wings generally have a chord greater than their individual span
5. said wings might have a curved rocker shape on their underbody between their nose and their trailing edge
6. said wings might have an area for two wings of twenty to more than sixty percent of the hull deck area
7. said wings oppose each other in a symmetric alignment in order to function consistently whether on port or starboard heel

whereby said wings will provide the boat with a means for adding a large increase in roll stability, allowing a considerable increase in sail area and speed.

## I CLAIM

1. A means for utilizing the properties of the underside of wings mounted on each side of any monohull sailboat, between the aft rail and the chine, comprising:

- (a) the wings tilted upward at a fixed dihedral angle, which will engage the water surface when the boat is heeled to the dihedral angle and
- (b) the opposing airborne wing mounted at the same dihedral angle establishes an outboard platform.

whereby the wings will provide the boat with a means to add a large increase in sail area and boat speed.

## **I CLAIM**

1. A means to enhance the properties of the underside of wings mounted on each side of any monohull sailboat, between the aft rail and the chine, comprising:

- (a) the wings tilted upward at a fixed dihedral angle, which will engage the water surface when the boat is heeled to the dihedral angle and
- (b) the opposing airborne wing mounted at the same dihedral angle establishes an outboard platform.

whereby the wings will provide the boat with a means to add a large increase in sail area and boat speed.

## **I CLAIM**

1. A means for optimizing the properties of the underside of wings mounted on each side of any monohull sailboat, between the aft rail and the chine, comprising:
  - (a) the wings tilted upward at a fixed dihedral angle, which will engage the water surface when the boat is heeled to the dihedral angle and
  - (b) the opposing airborne wing mounted at the same dihedral angle establishes an outboard platform.

whereby the wings will provide the boat with a means to add a large increase in sail area and boat speed.

## **I CLAIM**

1. A means to determine the shape, size and orientation of the underside of wings mounted on each side of any monohull sailboat, between the aft rail and the chine, comprising:
  - (a) the wings tilted upward at a fixed dihedral angle, which will engage the water surface when the boat is heeled to the dihedral angle and
  - (b) the opposing airborne wing mounted at the same dihedral angle establishes an outboard platform.

whereby the wings will provide the boat with a means to add a large increase in sail area and boat speed.